

CLAIMS

What is claimed is:

- 1 1. A method comprising:
2 a network computer (NC) client booting from a boot image provided by an NC
3 server, the boot image including information identifying the location of
4 one or more system volumes on the NC server, the one or more system
5 volumes containing operating system software; and
6 in response to an attempt to modify the contents of the one or more system
7 volumes, the NC client causing information identifying a modification
8 associated with the attempt to be recorded on the NC server separate from
9 the one or more system volumes in a storage area associated with the NC
10 client.
- 1 2. The method of claim 1, further comprising
2 transmitting information identifying a user of the NC client to the NC server;
3 receiving information identifying the user's desktop environment preferences
4 from the NC server; and
5 customizing a desktop environment of the NC client in accordance with the user's
6 desktop environment preferences.
- 1 3. The method of claim 1, wherein the one or more system volumes are presented to
2 the NC client as a split operating system including a core operating system
3 volume that can be read but not written by the NC client and a user operating
4 system volume that can be read and/or written by the NC client, wherein the
5 storage area associated with the NC client comprises a shadow volume
6 corresponding to the user operating system volume, and wherein the step of the

7 NC client causing information identifying a modification associated with the
8 attempt to be recorded comprises tracking modifications to the user operating
9 system volume in the shadow volume.

1 4. The method of claim 1, further comprising, prior to the step of booting from a
2 boot image provided by an NC server, (1) the NC client initiating a boot process
3 by booting into a local memory of the NC client, (2) the NC client transmitting a
4 boot request to the NC server, and (3) the NC client receiving the boot image from
5 the NC server.

1 5. The method of claim 3, wherein the step of booting from a boot image provided
2 by an NC server further includes the NC client locally executing the boot image
3 and mounting the one or more system volumes.

- 1 6. A network computer (NC) client comprising:
2 a bootstrapping means for booting from a boot image provided by an NC server,
3 the boot image including information identifying the location of one or
4 more system volumes on the NC server, the one or more system volumes
5 containing operating system software; and
6 a redirecting means, responsive to an attempt to modify the contents of the one or
7 more system volumes, for causing information identifying a modification
8 associated with the attempt to be recorded on the NC server separate from
9 the one or more system volumes in a storage area associated with the NC
10 client.
- 1 7. The NC client of claim 6, further comprising a banding means for incorporating
2 the modification within one or more bands comprising a predetermined number of
3 blocks.
- 1 8. A method comprising:
2 a network computer (NC) client booting from a boot image provided by an NC
3 server, the boot image including information identifying the location of
4 one or more system volumes on the NC server, the one or more system
5 volumes containing operating system software;
6 the NC client mounting the one or more system volumes; and
7 in response to a write request from a file system of the NC client that contains a
8 modification to the one or more system volumes, a block device driver of
9 the NC client redirecting the write request and causing information
10 identifying the modification to be recorded on the NC server in a storage

11 area associated with the NC client that is separate from the one or more
12 system volumes.

1 9. A method comprising:
2 a network computer (NC) client booting from a boot image provided by an NC
3 server, the boot image including information identifying the location of
4 one or more system volumes on the NC server, the one or more system
5 volumes containing operating system software that has one or more
6 customizable attributes;
7 in response to a change to an attribute of the one or more customizable attributes,
8 the NC client causing information identifying the change to be recorded on
9 the NC server in a storage area associated with the NC client that is
10 separate and distinct from the one or more system volumes.

1 10. A method comprising:
2 a network computer (NC) server providing a boot image to an NC client, the boot
3 image including information identifying the location on the NC server of
4 one or more system volumes containing operating system software; and
5 in response to a write request from the NC client that contains a modification to
6 the operating system software, the NC server recording information
7 identifying the modification on the NC server in a storage area associated
8 with the NC client that is separate from the one or more system volumes.

1 11. The method of claim 10, further comprising the NC server maintaining the one or
2 more system volumes as a split operating system including a single core operating

3 system volume that can be read but not written by the NC client and a user
4 operating system volume that can be both read and written by the NC client.

1 12. The method of claim 11, wherein the storage area associated with the NC client
2 contains a non-persistent shadow volume corresponding to the user operating
3 system volume to which modifications to the user operating system volume are
4 recorded.

1 13. The method of claim 12, further comprising storing information from the shadow
2 volume to a persistent, user-specific storage area for use in a subsequent user
3 session.

1 14. The method of claim 13, further comprising:
2 receiving information identifying the user of the NC client; and
3 providing the NC client with information indicative of the user's desktop
4 environment by accessing the persistent, user-specific storage area.

1 15. A network computer (NC) server comprising:
2 a boot server means for providing a boot image to an NC client, the boot image
3 including information identifying the location on the NC server of one or
4 more system volumes containing operating system software; and
5 a storage management means for recording information identifying a modification
6 to the operating system software in a storage area associated with the NC
7 client that is separate from the one or more system volumes, the storage
8 management means operative in response to a write request from the NC
9 client that contains the modification.

1 16. A machine-readable medium having stored thereon data representing sequences of
2 instructions, the sequences of instructions which, when executed by a processor,
3 cause the processor to perform the steps of:
4 providing a boot image to a network computer (NC) client, the boot image
5 including information identifying a location on an NC server of one or
6 more system volumes containing operating system software; and
7 in response to a write request from the NC client that contains a modification to
8 the operating system software, recording information identifying the
9 modification in a storage area associated with the NC client that is separate
10 from the one or more system volumes.

1 17. In a network computer (NC) system, a method comprising:
2 an NC server providing a boot image to an NC client, the boot image including
3 information identifying the location on the NC server of one or more
4 system volumes containing operating system software;
5 the NC client booting from the boot image provided by the NC server;
6 the NC client mounting the one or more system volumes;
7 in response to a write request from a file system of the NC client that contains a
8 modification to the one or more system volumes, a block device driver of
9 the NC client redirecting the write request to a storage area on the NC
10 server that is associated with the NC client and which is separate from the
11 one or more system volumes;
12 the NC server receiving the write request from the NC client; and
13 the NC server causing information identifying the modification to be recorded in
14 the storage area associated with the NC client.

1 18. A network computer (NC) system comprising:
2 an NC server configured to provide a boot image to one or more NC clients
3 associated with the NC system, the boot image including information
4 identifying the location on the NC server of one or more system volumes
5 containing operating system software; and
6 an NC client coupled in communication with the NC server, the NC client
7 configured to receive and boot from the boot image, the NC client
8 including a file system process and a block device driver, the block device
9 driver configured to redirect write requests directed to the one or more
10 system volumes to a storage area on the NC server that is associated with
11 the NC client and which is separate from the one or more system volumes.